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PUS IN THE PELVIS, AND HOW TO DEAL WITH IT.

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It is remarkable, in view of accurate pathological and anatomical researches of such men as Bernutz and Goupil, made over twenty years ago, that the profession should remain to this day burdened with the unscientific and erroneous ideas of pelvic troubles which sprung from ignorance and are perpetuated by conservatism. Pick up to-day almost any alleged authority on gynecology, and you will find pelvic troubles gravely discussed under such headings as perimetritis and parametritis, pelvic abscess, and the like, with lengthy disquisitions as to the pathological changes, suppositious causes for the conditions, and the varieties of treatment indicated in each.

Such discussions are of value only as curiosities, and are of more service to the progressive physician as kindling than as a guide to relieve his suffering patients.

Briefly stated, perimetritis is defined as an inflammation of the peritoneal covering of the uterus and its appendages; a comparatively rare condition, frequently fatal. Parametritis is an inflammation of the cellular tissue of the broad ligament, a common condition, often ending in abscess, and rarely fatal; while pelvic abscess means pus in the pelvis. Such were the old ideas; the new faith believes them to be essentially salpingitis—inflammation of the tubes and ovaries being the cause primarily of all these troubles.

In this brief paper I shall confine myself to the subject of pus in the pelvis, and I speak entirely from my own experience, which is not small. Right here I wish to say that I do not deny that the condition known as parametritis

may possibly occur. Inflammation of the cellular tissue and formation of pus can occur anywhere in the body where there is cellular tissue, from the scalp to the sole of the foot. But I have never seen it in the pelvis independent of tubal trouble. If it ever does so occur it must be the result of traumatism, and I cannot see how it would fail to involve the surrounding structures. It is a very rare condition of itself. That it occurs in connection with, and consequent to, tubal and ovarian trouble I have frequently seen and demonstrated by operation, but even here it is the exception and not the rule.

Pus in the pelvis is a broad subject, and I accept it in order to narrow it to proper limits. By pus in the pelvis I mean pus that has its *fons et origo* in the pelvic organs or their investment. The rarer causes of pus in the pelvis may be said to be: (*a*) carious bone, as psoas abscess; (*b*) traumatism, as sloughing results of electricity, direct violence, etc.; (*c*) foreign bodies, as extra-uterine bones, etc. But the general rule is only established by such exceptions, and the general rule is that pus in the pelvis is always the result of a diseased condition of the uterine appendages, whether it occurs as a result of a ruptured extra-uterine pregnancy, a suppurating ovarian or dermoid cyst, or salpingitis caused by gonorrhœa, parturition, injury to small tumors, dirty instruments, electricity, or what not. In general, then, when you have pus in the pelvis you will find its origin in the uterine appendages. I have seen pus discharging from the rectum, from the bladder, from the umbilicus, from the vagina; I have seen psoas abscess, perforating appendicitis, idopathic peritonitis, and "typhoid fever," and found the seat of trouble in the tubes and ovaries. In all my experience I have never seen pus in the pelvis independent of the appendages. It may perhaps occur, but it is strange that I should not meet with it. Of course, the pus cases I see answer the description given of para- and perimetritis as far as subjective or objective signs are concerned.

Pus in the pelvis is very rarely a simple single abscess, and this fact has most important bearing in the treatment. From the anatomical relations of the organs the complexity is easily understood. Peritoneal inflammations and adhesions are always present. The tubes are frequently divided into pus-pockets, separate from each other and from other collections of pus, as pus-pockets in the ovary or in the cellular tissue. The condition very frequently occurs on both sides of the uterus at the same time. To make the statement definite, I have seen more than once double pyosalpinx and double ovarian abscess contained in a pus-pocket in the peritoneal cavity composed of adherent intestines and inflammatory tissue, four abscess cavities contained within a fifth. Again, I have seen a single pus-tube with four distinct pus-pockets in it. Again, pus can burrow through the cellular tissue and find vent as I have stated above, entirely misleading a careless observer as to the true condition of affairs.

I have intentionally omitted reference to analogous pelvic conditions, and it is not my purpose to discuss the diagnosis. The diagnosis is easy in typical cases, the symptoms are marked, and pelvic examinations established the existence of the lesion. In acute cases, the treatment for any condition simulating it would be the same. In chronic cases the errors of diagnosis are most frequent, the septic condition of the system is generally marked. Typhoid, in fact, as I have stated, chronic purulent pelvic disease, has been more than once mistaken for typhoid fever, and in three cases within my personal knowledge was treated as such for over three months by an alleged specialist in diseases of women. Beware of atypical typhoid fever in women. I have seen it called psoas abscess, but in general it has been called suppurating parametritis or plain pelvic abscess.

How shall pus in the pelvis be treated?

The general principles of surgery for the treatment of pus in any other part of the body apply with equal force

to the pelvis: namely, where pus is present, evacuate it; and, secondly, remove the cause of the suppurative process.

It is equally unsurgical and unscientific to allow pus to remain in the pelvis, as it would be to allow it to remain in the brain, in the mammary gland, or under the fasciæ in any part of the body. It is equally unsurgical to allow a suppurating tube or ovary to remain in the pelvis, as it would be to allow a sequestrum of dead bone to remain or to permit a necrotic placenta or membranes to be retained in the uterus. These principles do not admit of evasion.

All sorts and kinds of treatment have been tried without avail. Every man of experience knows the futility of counter-irritation, local depletions, or a general systemic treatment in the vast majority of these cases.

There are only three methods of treatment common to physicians to-day, namely, electricity. vaginal drainage, and abdominal section with the removal of the diseased parts, thorough irrigation of the peritoneal cavity and drainage.

The first of these methods need scarcely be mentioned in cases where pus is already present; no good is claimed for it here. But if perchance, the enthusiastic electrician has not recognized the presence of thickening in the cellular tissue, he can dissipate the conditions like dew before a hot sun. The folly of electrical treatment needs no further exposition than the advice of one of its most celebrated advocates, namely, to convert an acute inflammatory condition into a subacute, and then chronic stage, by gentle persuasive currents; and, when it has reached the chronic condition, to dissolve it by the strongest currents. When we remember that adhesions are often much stronger than the normal tissues that they bind together, the dissolving value of electricity sinks out of contemplation. Electricity has no place in the treatment of pus in the pelvis. With regard to vaginal drainage, it is a crude, inefficient method, and not so safe as some would have us believe.

Were pus in the pelvis, always or even generally, in a single abscess cavity, the method might be rational and effective; but at its best it would be a poor substitute for abdominal section. In abdominal section we have the quickest, easiest, most exact, and therefore, safest mode of treatment for pus in the pelvis.

A small incision, rapid enucleation of the offending tubes and ovaries, the breaking up and evacuation of the separate pus-pockets, the separation of adhesions, the thorough washing out of the peritoneal cavity by copious irrigations of warm distilled water, the placing of a glass drainage-tube in the most depending portion of the peritoneal cavity, and the careful closure of the abdominal incision, give the patient the quickest relief, permanent cure, and very often snatch her from an impending death. Moreover, here we attain the most ideal treatment, for at no other point of the body can we enucleate completely an abscess with its containing walls and pyogenic membrane. However, we should always bear in mind that the province of the surgeon is, first to save life, then to relieve suffering, rather than to perform ideal operations. Many patients dying with pus in the pelvis need but a feather's weight to depress the beam.

In such cases the indications are: to evacuate the pus, wash out the cavity, and wait until a future time to remove the offending cause.

DISCUSSION.

Dr. Virgil O. Hardon, of Atlanta Ga.—Mr. President, this morning I advocated a method of procedure which should accomplish just what Dr. Price has been preaching—that is, to put the patient in a condition when an ideal operation might be done. If a patient is at the height of an acute peritonitis she is not in a favorable condition for laparotomy. If she is suffering from a temperature of 103° to 105°, with a pulse up to the point of which Dr. Price speaks, which cannot be counted at the wrist,

he advocates subduing the inflammation by gentle means. I am glad he has changed his opinion since morning.

Dr. George J. Engelmann, of St. Louis.—I cannot permit the sweeping remarks of Dr. Price about the use of electricity to pass without some corrections. It is a subject that is by no means settled as yet, but, notwithstanding the numerous conditions for which electricity has been applied, I am not aware that any one has suggested its use in suppurative troubles, unless it was simply for the sake of making an opening by the cauterizing properties of the metallic pole, then distending with the dilator, and draining large accumulations of pus. By making an opening with the negative pole of the battery you avoid hemorrhage, and you have a non-contracting opening through which you can at once pass a drainage-tube. That is the only purpose for which electricity has been used in suppurative conditions, unless it is the secondary one of causing absorption of the thickened walls after evacuation of pus. I do not think any one would attempt to use it for the purpose of replacing surgical interference in abscesses already formed. We cannot compare a surgical operation with the use of electricity, as Dr. Price seems to, because the two methods do not answer in the same condition. Each one has its proper sphere, and answers a definite purpose.

Dr. Price spoke of some one—I do not know to whom he refers—who favors the use of electricity in reducing exudates in the pelvis and he appears to me to have spoken of such a procedure as a ridiculous one. Whether or no I have understood him correctly, I will say that there is no means of doing this as rapidly and positively as by electricity. The electric current will not only bring about the absorption of an exudate, whether in the pelvis or any other part of the body, but the absorption of scar-tissue as well, and of cicatricial growths, which recur when cut out with a knife. The results achieved by the proper use of electricity on solid exudates are marvellous, but it would be a mistake to use electricity if pus has formed to any extent.

I am confident that every member of this Association heartily endorses the statements made by Dr. Price, that wherever pus forms we should remove it,—remove it early and thoroughly. It is a pleasure to hear a sound doctrine well enunciated, and Dr. Price has well demonstrated a sound surgical doctrine which is accepted, and has, I hope, been practised by all of us in other

fields; it has certainly been accepted in theory, but I fear not carried out in cases of purulent accumulations in the pelvis, and great credit is due Dr. Price for doing in the pelvis what every student of medicine knows to be right in any other locality. Dr. Price has taught us to do in cases of pelvic abscess what we do with every other abscess, and by his success he has proven that it is the correct course, and can be successfully adopted by the skilled aseptic surgeon. We know this to be the correct course, and yet but very few have dared follow it, and these few, like Dr. Price himself, have only ventured to carry out this fundamental surgical rule since aseptic surgery has fully developed. That an abscess should be emptied when pus has formed, and that a bleeding vessel must be tied, are equally simple, fundamental, and well-known rules of surgery; yet, the best operators in this advanced eighth decade of this progressive nineteenth century have stood by the bedside, with folded hands, and have seen life slowly ebbing away through an open vessel, until Lawson Tait taught us that we must cut down and ligate a bleeding vessel in the ruptured sac of an ectopic gestation precisely as we would if it were in the arm or leg. Strange as it may seem, able surgeons failed in their own practice to carry out the A B C of surgery, which every graduate, every student of medicine is familiar with, until Tait taught us to tie the bleeding vessel in the pelvis as we would tie it elsewhere, until others equally far-sighted taught us that an abscess in the pelvis must be emptied and cleansed like an abscess in any other part of the body.

To Dr. Price we are indebted for his clear and forcible elucidation of the subject, and for the substantial proof he has given of the correctness of his method of dealing with pus in the pelvis by his brilliant success.

Dr. I. S. Stone, of Lincoln, Va.—I am pleased with the remarks of Dr. Price, and I think we have had one of the most interesting series of discussions which I have ever participated in or heard. Although I have been benefited by what I have heard, yet I feel I speak the minds of many present when I say the case is not decided as yet as to what these hard masses in the pelvis are. We find them with a high temperature, especially following abortions, and occasionally following natural delivery. It occurred in my practice, in the last year, to see perhaps a half-dozen of these cases. I have found hard masses not unlike fibroid

tumors. I have read Tait's book on *Ectopic Gestation*, and he says, very pertinently, that many of these masses in the broad ligament are extra-peritoneal, and an examination will hardly reveal just what they are. Again, in Dr. Playfair's paper, read before the British Medical Association at its last session, the eminent author claims to have dissipated such a mass by means of the electric current. Mr. Tait declared that the exudate in Playfair's case was *blood in the broad ligament*, and that it would have been absorbed without the help of electricity.

With regard to operative inteference. If we offer to do an operation in some of these cases it will certainly be rejected, so that it is of great importance to the general practitioner to know what to do in such cases. If they are not prepared to operate, they may select some specialist to do so.

I repeat, that I have had such cases in my practice, and I want to know what we are to do in case operation is refused. I am aware that some of them get well enough to satisfy themselves, and well enough to do work, and have more children.

Dr. W. L. Robinson, of Danville, Va.—I hold pretty much the same theories as those that have been advanced by Dr. Stone. I have been interested in the discussions, and have had some experience in the matter of pus-cavities. I have been impressed with the fact of the tolerance of the system to these accumulations of pus. How are we to decide between those cases which are simply inflammatory, and, treated, get well, and those which require an operation for the removal of a pus-tube or tubes?

I recall to mind a case that had been under observation for four or five years. Every three or four months pus was seen discharging through the rectum high up. The patient was seized with a severe pain, high temperature, and a rupture of the sac through the rectum relieved it temporarily. When this patient came under my care for the first time, she gave me a history something like this: She had not had a movement of the bowels for ten days. She was in fairly good health. She had tried every means to procure an evacuation both by purgatives and enema. I performed laparotomy. I found the whole pelvis filled with pus, and adhesions in every direction. I broke them up, washed out the cavity with an antiseptic solution, and in three weeks the patient was well. She has had no recurrent attacks, and no pus-tubes since. Again, I ask, how are we to decide

between those cases which can be cured by medical treatment and those in which we do a surgical operation?

Dr. B. E. Hadra, of Galveston.—There is no question that there are cellulitic abscesses. I suppose you are all familiar with Thomas's operation of lifting up the vaginal cover of the cervix in order to get into the paracervical cellular tissue and empty abscesses there. It clearly demonstrates the extra-peritoneal location. I have operated several times for cellulitic abscesses, approaching them by an incision over Poupart's ligament, like that for posas abscesses. Also phlegmonous abscesses following injuries to the cervix; those—for instance, after caustic applications—are mostly extra-peritoneal. Therefore, I do not subscribe to the theory that all and every pelvic abscess is intra-peritoneal, though I concede that clinical evidence proves them to be more frequent than presumed. I think that, for diagnostic purposes, traction of the cervix by a tenaculum is of value. If the tumor is cellulitic, it will come down with the cervix, being mostly attached to the latter. If it is intra-peritoneal, it will very likely be in connection with tubes or ovaries. It will thus become more distant, because the named organs make, as a rule, an upward lever movement when the womb is pulled downward.

A very excellent article on the differences between cellulitic and intra-peritoneal abscesses appeared some years ago in the *American Journal of Obstetrics*, written by Mundé.

Now, in such extra-peritoneal abscesses there is certainly no need for laparotomy. Besides, I do not agree with Dr. Price that pus in the pelvic cavity is, under all circumstances, due to tubal affections. How is it in men? It is true that the tubes offer the only entrance into the female peritoneal sac, but under morbid conditions the infection may come from and through the walls of the bowels, the gall-bladder, liver, the kidneys—in short, from any defective or diseased intra-peritoneal organ.

Dr. W. W. Potter, of Buffalo, N. Y.—At this late hour I hesitate to enter into a discussion of this interesting subject, but I may seize upon this last moment before recess for the purpose of alluding to one or two collateral points.

"Pus in the pelvis and how to deal with it." If the discussion were limited to that question alone there could be but one answer —one proper answer, viz., to handle it surgically. No person present will, I am sure, take exception to that.

It is, however, pertinent to consider the antecedent conditions that may lead to pus in the pelvis; at all events, this appears to me a legitimate inquiry in a discussion on the subject. I am sure the majority of observers to-day will admit that if there is pus in the pelvis it gets there through some medium of infection. I am equally sure that there are three principal sources of infection, viz.: 1, traumatism; 2, parturition; and 3, gonorrhœa. In other words, we have a traumatic, a parturient, and gonorrhœic source that are chiefest in the causation of pus in the pelvis.

After considerable experience, predicated upon the observance of many cases, I may asseverate that the uterine sound has been a frequent medium of carrying an infection into the pelvic cavity that has resulted, in some instances, in the formation of pus. It has certainly led, oftentimes, to intra-pelvic inflammations that have been the sources of innumerable and multifarious woful conditions in women; and I am of the opinion that, unless it can be limited in its use to exceptional conditions in careful hands, the sooner the uterine sound is banished from the gynecological armamentarium the better—better for woman, better for the art.

It has become routine practice with many men who aspire to gynecological fame, to introduce the sound into the uterus on each and every occasion when a woman presents herself for treatment, and it is this indiscriminate and unnecessary employment of the instrument that I desire particularly to condemn; for the sound, even when clean—aseptically clean—may do infinite harm through its faulty or careless manipulation. It may do violence to the delicate structures through ungentle use, which is bad; it may carry with it the germ that will set up a destructive inflammation, which is worse.

I have spoken of this matter on previous occasions in the presence of some of the gentlemen now in this audience, and they know my views precisely on the subject. After more mature observation and an enlarged experience I wish to confirm what I have stated many times before, that the uterine sound is a source of infinite harm-doing to woman. I doubt not there are many who can and do use the instrument skilfully and harmlessly; I do not criticise it in their hands in exceptional cases, but I do inveigh against the indiscriminate and routine use of an instrument that is not needed for diagnostic purposes, much less for treatment, and which is one avowed source of producing pus in

the pelvis, a condition that Dr. Price has so skilfully and effectually dealt with in his excellent and instructive paper.

DR. PRICE.—Dr. Potter has condemned the sound. I have almost forgotten such an instrument is in use. There is no question that it has done great mischief.

Not long ago Emmet condemned the indiscriminate use of trachelorrhaphy. The mortality ran up above that of ovariotomy to the extent of three or four percentum with prominent operators. The results at present are not as good as they should be. Some women are suffering more than they were before the operation.

If you refer to Pepper's *System of Medicine*, vol. iv., you will find some one closes the cervix in tubal disease. The operator in this case saw the woman was going to die, and saved life by removing a pus-tube. Some of the large pus-tubes which have been passed around were removed from women who had their cervices closed. It is surprising, gentlemen, to hear of the large number of women that are suffering, although they are being treated by gynecologists for some aberration or other, and but few of them agree what it is. In some cases the ovaries are removed and the patients suffer as much after as before operation. Some patients have gone on the other side of the water to be operated upon and the operation has done a great deal of harm. The cases are badly selected. I do not wish the members of this Association to understand me as wholly condemning the operation, for I have seen good results from operations in properly selected cases.

Dr. Hardon does not understand the group of cases to which I refer—the desperate cases, and the open treatment or operation to save life purely. Concerning the treatment of the class he specifies, we do not agree. In acute pyosalpinx, or abscess of the ovary; in acute pelvic peritonitis, puerperal or due to leakage from an acutely inflamed tube, with an accumulation of fluid in the pelvis, section, removal of the offending cause, irrigation and drainage are the ideal treatment. This without regard to pulse or temperature. It is impossible to overlook the good results of prompt pelvic surgery in the class he refers to.

The "hard masses" or "solid exudates," mentioned by Dr. Stone, are small tumors, large pus-tubes, ovarian abscesses, or

dangerous inflammatory products, and should be removed promptly. Extra-peritoneal exudates are very rare.

"How are we to decide?" Dr. Robinson answers his own query in the case detailed. Surely the answer is satisfactory. I am sorry Dr. Hadra clings to his ancient pathology.